

**Remarks**

Favorable reconsideration of this application is requested in view of the following remarks and discussion.

Although the outstanding Office Action is final, no amendments are made to the claims, and therefore full consideration of this response is requested.

Claims 1-11 are currently pending in the application.

In the Office Action claims 1-11 are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,196,911 to Preston et al. (Preston) in view of U.S. Patent No. 5,547,417 to Breivogel et al. (Breivogel). It is requested that the rejection of the claims be withdrawn, and that the claims be allowed, for the following reasons.

The present invention, as recited in independent claim 1, is directed to an abrasive cloth dresser including a plurality of abrasive grain units each having a large number of abrasive grains. Adjusters serve to adjust heights of the abrasive grain units.

The claimed invention can provide numerous advantages. By way of specific examples, the abrasive cloth dresser is capable of dressing an abrasive cloth to have a uniform surface as well as to have a surface capable of polishing a particular type of material to a desired degree. In particular, through the use of the adjusters, one or more of the abrasive grain units can be disposed at a height different than a height at which one or more other abrasive grain units are disposed. By this arrangement, when the abrasive cloth dresser is used to dress an abrasive cloth, the surface of the abrasive cloth will be made uniform. Further, because of the difference in height between the abrasive grain units, a desired abrasion will be imparted to the abrasive cloth, and portions of the abrasive cloth removed during dressing, which would otherwise clog the abrasive cloth dresser and impede or prevent

further dressing, are discharged through gaps resulting from the different heights of the abrasive grain units.<sup>1</sup>

Preston discloses, in column 2, lines 22-26 and column 4, lines 7-12, a tool 10 including abrasive segments 14 which is used to remove material from a workpiece, such as through grinding or cutting with the abrasive segments 14. However, Preston does not depict or describe an abrasive cloth dresser (i.e., Preston does not describe a dresser that is used to dress an abrasive cloth, the abrasive cloth being used in a material removal operation on a workpiece, but rather discloses the tool that is used to remove material from the workpiece). Thus, regardless of the disclosure of Breivogel, it is submitted that the combination of Preston and Breivogel does not disclose or render obvious the claimed features of an abrasive cloth dresser, as recited in independent claim 1.

It is therefore requested that the rejection of independent claim 1 be withdrawn, and that independent claim 1 be allowed.

Notwithstanding the above discussion, which provides sufficient grounds for the allowance of independent claim 1, the following additional remarks are submitted.

Preston discloses, in column 4, lines 17-19, that the tool 10 includes the abrasive segments 14, which primarily act to abrade a work object or workpiece, surrounded by a filler material 16. As shown in Figures 1-3, for example, of Preston, the abrasive segments 14 appear to be embedded in the filler material 16.

Breivogel is relied on to disclose adjusters, which the Office Action concedes are not disclosed or rendered obvious by Preston.

As stated in MPEP § 2143.01, “[i]f the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims *prima facie*

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<sup>1</sup> Please see, for example, from page 10, line 25 to page 11, line 19, of Applicants’ originally filed application.

obvious.” In this case, it is submitted that the modification proposed by the Office Action of providing the asserted adjusters of Breivogel to the abrasive segments 14 of Preston would change the principal of operation of Preston. Specifically, the proposed modification such that the abrasive segments 14 would be adjustable in height is in direct opposition to the disclosure of Preston that the abrasive segments 14 are embedded in the filler material 16, such that any movement or adjustment in height of the abrasive segments 14 is prevented.

Thus, it is submitted that the above discussion provides alternate grounds for the allowance of independent claim 1.

Further, MPEP § 2143.01 states that “[o]bviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion or motivation to do so found either explicitly or implicitly in the references themselves or in the knowledge generally available to one of ordinary skill in the art” and that “[t]he mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination.”

In this case, the Office Action has not provided the required teaching, suggestion, or motivation in Preston or Breivogel to combine Preston and Breivogel as proposed in the Office Action. Preston, as discussed above, discloses the abrasive tool 10 including the abrasive segments 14 immovably embedded in the filler material 16. Breivogel, as shown in Figures 1a, 1b and 2a, and as discussed from column 6, line 58 to column 7, line 6, discloses a conditioning block 222 rotated to move back and forth over a polishing pad such that two diamond tipped threaded shanks 232 form two minute grooves 254 in the polishing pad. It is submitted that neither Preston nor Breivogel suggests adjusters serving to adjust heights of abrasive grain units including a large number of abrasive grains in a dresser. Rather, Preston discloses a tool, rather than a dresser for a tool, and does not disclose adjusting heights of

abrasive grain units. Breivogel discloses a conditioner in which two diamond tipped threaded shanks, rather than abrasive grain units including a large number of abrasive grains, are adjusted.

The Office Action's proposed motivation is not provided by Preston, contrary to the assertion in the Office Action. Although the Office Action states that it would have been obvious to provide adjusters to adjust heights of the abrasive segments 14 of Preston, as discussed above Preston discloses that the abrasive segments 14 are embedded in the filler 16 and are therefore not adjustable in height or movable at all. Thus, the only motivation for the proposed combination of Preston and Breivogel to provide height adjustable abrasive grain units is provided by Applicants' disclosure. Further, neither Preston nor Breivogel can provide the above-discussed advantages provided by the present invention as set forth in the claims.

Thus, it is submitted that the above discussion provides alternate grounds for the allowance of independent claim 1.

Independent claim 11 is allowable for reasons similar to those of independent claim 1. Therefore, it is requested that the rejection of the independent claim be withdrawn, and that independent claim 11 be allowed.

Claims 2-10 are allowable for the same reasons as independent claim 1 from which they depend, as well as for their own features. It is therefore requested that the rejection of these dependent claims be withdrawn, and that dependent claims 2-11 be allowed.

Consequently, for the reasons discussed in detail above, no further issues are believed to be outstanding in the present application, and the present application is believed to be in condition for formal allowance. Therefore, a Notice of Allowance is earnestly solicited.

Should the Examiner deem that any further action is necessary to place this application in even better form for allowance, the Examiner is encouraged to contact the undersigned representative at the below listed telephone number.

Respectfully submitted,

OBLON, SPIVAK, McCLELLAND,  
MAIER & NEUSTADT, P.C.



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Gregory J. Maier  
Attorney of Record  
Registration No. 25,599

Philip J. Hoffmann  
Registration No. 46,340

Customer Number  
**22850**

Tel: (703) 413-3000  
Fax: (703) 413 -2220  
(OSMMN 06/04)

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